

Notice of Allowability

Application No.

10/671,297

Examiner

Dennis L. Vautrot

Applicant(s)

VERMA ET AL.

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/31/2006.
2. ☒ The allowed claim(s) is/are 1-14, 16, 17, 20-22 and 24.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

1. This Action is responsive to the applicant's amendment filed 31 October 2006. After a thorough search and examination of the present application and the prior art made of record, Claims 1 – 14, 16, 17, 20 – 22, and 24 are allowed.

Drawings

2. The revised drawings filed on 31 October 2006 are accepted. Therefore the objection related to the drawings in the Office Action mailed 16 October 2006 is withdrawn.

Specification

3. The changes to the specification filed on 31 October 2006 have been accepted. Therefore the objection related to the specification in the Office Action mailed 16 October 2006 is withdrawn.

Reasons For Allowance

4. The following is an examiner's statement of reasons for allowance:

In the Examiner's Office Action for Final Rejection of 16 October 2006, the 35 U.S.C. § 102, rejections were primarily based on the reference of Mohan (U.S. Patent 6,009,425). As discussed in the prior office action, Mohan appears to show separate locks on the neighborhood and the tuple, but not the type of locks defined, nor a functional equivalent, to what is described in the current application. This is important because the new types of locks allow for greater

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concurrency for non-serialized processing than was previously available using previously defined locking combinations. The combinations of locks, as described in Figure 7 of the drawings was particularly persuasive in showing the novelty of the invention. In the 16 October 2006 office action, the Examiner objected to claims 2, 3, 6 – 9, 13, 15, 18 and 20 – 24 as having allowable subject matter. Applicant has amended each independent claim to include previously objected to material, or incorporated independent claims in with dependent claims to overcome the rejections of the Office Action dated 16 October 2006. The claims are now believed to be in condition for allowance.

Specifically, the claims relating to **the newly created locks, exclusive non-serializable lock (Xn), exclusive neighborhood lock (Xnei), shared non-serializable lock (Sn), and Shared neighborhood lock (Snei) were not able to be located in prior art.** Furthermore, the **locking scheme for granting a first transaction an exclusive lock on a first tuple and a weak lock on the tuple's neighborhood, and further granting a second transaction (a concurrent transaction), an exclusive lock on a second tuple located in the neighborhood, is novel.**

After further review of the search results previously conducted and Applicant's most currently amended claims, and consideration of the above Remarks, the Examiner is persuaded that the prior art made of record does not teach the subject matter combined in the elements of each of the independent claims 1, 2, 3, 6, 8, 10, 13, 16, 20, 21, and 22 as described above.

An expanded and update search for the prior arts on EAST database and on domains (EAST, NPL-ACM, Google, NPL-IEEE) has been conducted. The prior arts searched and investigated in the database and domains does not fairly teach or suggest the teaching of the claimed subject matter as reflected by the combined elements in the independent claims 1, 2, 3, 6, 8, 10, 13, 16, 20, 21, and 22.

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The dependent claims in the groups (4-5 & 24), (7), (9), (11, 12, 14), and (17), depending on claims 3, 6, 8, 10, and 16, respectively, are also distinct from the prior art for the same reason.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis L. Vautrot whose telephone number is 571-272-2184. The examiner can normally be reached on Monday-Friday 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DV
7 November 2006


JOHN COTTINGHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

A.S.L.